

IN THE SPECIFICATION:

Please amend the specification at page 22, paragraph 2, to read as follows. This amendment to the specification adds some further description of subject matter disclosed in the application as filed, and is believed not to disclose new matter.

In a further aspect of the invention, nucleus pulposus implants are provided having shape memory that are configured to allow extensive short-term manual, or other, deformation without permanent deformation, cracks, tears, breakage or other damage, that may occur, for example, during placement of the implant into an intervertebral disc space. Referring now to FIGS. 15A and 16A, in one form of the invention, implant 40 includes a load bearing elastic body 41 with shape memory and having a first end 42 and a second end 43 that are positioned adjacent to a central portion 44 to form at least one inner fold 45. As shown in the drawings, the ends may be folded so that ends 42a and 43a abut without overlapping. Inner fold 45 preferably defines at least one aperture 46 which is advantageously arcuate, but the apertures are small relative to the size of the implant so that the center "core" of the implant is substantially solid when the implant is in its first, folded configuration. The elastic body is deformable, or otherwise configurable, manually, for example, from this first folded, or otherwise relaxed configuration shown in FIG. 15A into a second, substantially straightened, or otherwise non-relaxed configuration shown in FIG. 16A for placement into the intervertebral disc space. As elastic body 41 has shape memory, it

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returns by itself, automatically, back into the first folded, relaxed configuration once manual or other force is no longer exerted on the body (in other words, the shape memory biases the implant to its first configuration). These implants therefore provide improved handling and manipulation characteristics in that they may be deformed, configured and otherwise handled by an individual without resulting in any breakage or other damage to the implant.

Further describing the shape memory nucleus prosthesis implant 40, implant 40 includes surface depressions 47, or other surface irregularities as more fully described below, that form inner fold 45 when

the implant is in its relaxed configuration. Ends 42 and 43 have end surfaces 42a and 43a, respectively, that are generally flat, and substantially parallel, or perpendicular in other forms, to an axis X passing through the width of the implant in its relaxed configuration, wherein the ends may abut each other without overlapping, as seen in FIGS. 15A, 15B and 15E-15N. The ends of the implant may each alternatively abut the central portion of the implant, as shown for implants 60 and 70 in FIGS. 15C and 15D, respectively, to form a generally bi-lobed or binocular-shaped implant.

Please amend the specification at page 24, paragraph 3, to read as follows. This amendment to the specification adds some further description of subject matter disclosed in the application as filed, and is believed not to disclose new matter.

In yet other forms of the invention, the folding implant may have a surface that includes surface projections that further aid in allowing short-term deformation of the implant without permanent deformation or other damage as described above. Referring now to FIGS. 15D and 16D, implant 70 includes a load bearing elastic body 71 having a first end 72, a second end 73 and a central portion 74. Inner fold 75 defines an aperture 76 and includes an inner fold surface 77 having wrinkles, indents or projections 78 thereon. (Whether the surface feature is called a wrinkle, an indent, or a projection is largely a matter of style, and depends primarily on one's definition of where the "surface" lies. In all cases the surface feature provides a change in the thickness of the implant at that point, to relieve stress and prevent cracking or tearing of the implant when the implant is straightened for implantation, as noted below.) Projections 78 of inner fold surface 77 extend into aperture 76. These wrinkles advantageously facilitate stretching of the implant without deformation, cracking, tearing, breakage, or other damage when the implant is straightened or elongated for insertion into the intervertebral disc space. In the embodiment shown in FIGS. 15D and 16D, the wrinkles, or surface projections, extend along the entire length of elastic body 71, including central portion 74. Other implants having wrinkled inner fold surfaces are seen in FIGS. 15E and 16E and other wrinkle configurations upon folding the implant are seen in FIGS. 15K-15N and 16K-16N.